Exercise Myths: Separating Fact from Fiction

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Myth #1

You should train your abdominals every day for best results.

"I train my abs every day but I don't seem to be making any progress…"

As a personal trainer, this is one of the most common laments that I hear. People are forever seeking that elusive “six-pack” and have been led to believe that daily abdominal exercise is the key to achieving this lofty goal. Day after day, week after week, they perform sit-ups, leg raises and other abdominal movements, hoping to chisel their abs to perfection. Still, after all this hard work, their midsections inevitably appear no different than when they first started training.

Throughout the ages, it has been taken as gospel that the abs can, and should, be trained on a daily basis. While it is widely accepted that other muscle groups need sufficient rest to facilitate recovery, the abs somehow have always been considered “different”—an opinion that’s even shared by many fitness professionals. The justifications given for this sentiment, though, are largely based on hearsay, not established fact.

One of the biggest misperceptions is that abdominal training helps to flatten the stomach. Those who adhere to this notion feel that, by training their abs with increased frequency, they can whittle down their spare tire in an expeditious fashion. Unfortunately, this simply isn't the case. As previously discussed, spot reduction is a physiological impossibility. No amount of sit-ups, crunches or leg raises will strip away abdominal fat—it just doesn’t work. Abdominal exercise only helps to develop the muscles of the abdomen; if a layer of fat obscures your midsection, you'll never see the underlying muscles, regardless of training frequency.

Another misguided belief is that daily abdominal training helps to promote muscle tone rather than bulk. This theory, however, ignores the process by which muscular development takes place. The degree to which a muscle increases in size is predicated more on the way that it is trained (i.e. amount of reps, length of rest intervals, etc), than how often it is trained. Muscle tissue is actually broken down while working out. It is
during rest where your body begins to repair this damaged tissue, fueling the acquisition of muscle tone. Short-circuiting the recuperative process doesn’t allow adequate time for a muscle to regenerate itself. Train too much and you’ll stop muscular development completely!

It also is theorized that, since the abdominals are an endurance-related muscle, they can tolerate repeated bouts of physical activity. The abs recover very quickly from exercise, the thinking goes, so there is no need to give them extended rest. The problem with this theory, however, is that the abs really are not an endurance muscle at all! The rectus abdominis (i.e. the "six-pack" muscle) actually is comprised of roughly equal amounts of fast-twitch (strength-related) and slow-twitch (endurance-related) fibers—a composition similar to the muscles of the thighs and arms. Compare this to a true endurance-related muscle like the soleus (one of the calf muscles), which has about 80 percent slow-twitch fibers, and you’ll see that the abs are just as oriented to strength as they are to endurance.

The truth is, the abs are not structurally different from the other major muscles of the body. Accordingly, in order to ensure adequate recuperation, they should be trained no more than three times per week, allowing at least 48 hours rest between training sessions. It even can be argued that those who are involved in a regular strength training program should train their abs even less frequently than other muscles. The abdominals act as "stabilizer muscles, helping to support the spine and maintain balance during bouts of intense physical activity. They are indirectly involved in virtually every exercise that you perform. Squats, military presses and numerous other movements require significant contributions from the abdominals during performance; in effect, your abs are being trained every time you work out. This is the reason why many bodybuilders never train their abs at all yet are able to maintain phenomenal ab development.

The Bottom Line

In final analysis, while achieving an abdominal six-pack is certainly an attainable goal, frequency has little to do with maximizing results. As long as you work your abdominals intensely, daily training is completely unnecessary—in fact, it’s counterproductive. With respect to ab exercise, less really can be more!

Moreover, you don’t need any fancy equipment to produce results. The “gut-busters” and “ab-blasters” sold on late-night infomercials aren’t any more effective than traditional exercises (such as the crunch or reverse curl) in promoting abdominal development. If you stick with the basics and focus on quality rather than quantity, results are sure to follow.

Myth #2

You can isolate your lower abs from your upper abs.
Without question, the lower abdominal region tends to be one of the biggest problem areas. While the upper abs generally respond rather easily to intense training, the lower portion always seems to lag behind. This has a lot to do with the structure of the abdominal musculature. The rectus abdominis is a tapered muscle; it is wide at the top and narrow at the bottom. Consequently, because there isn’t much muscle to work with (about one-third the amount muscle in the lower abs as compared to the upper abs), developing the lower abdominal region is a difficult proposition.

For women, developing the lower abs tends to be especially problematic. Due to the monthly bloating associated with menstruation, the muscle in the lower abdominal region is continually stretched beyond its normal capacity. With each successive menstrual cycle, it stretches beyond its normal capacity. With each successive menstrual cycle, it stretches further and further. Making matters worse, the rigors of childbearing (for those who have endured pregnancy) distends the pelvis even more—for an extended period of time, no less. The cumulative effects of these events cause the lower abdominals to become soft and pliable, often producing the dreaded “pelvic bulge.”

To combat this quandary, people are constantly seeking ways to selectively isolate their lower abs. Some fitness professionals even advocate training the upper and lower abs on separate days. They contend that, by alternating workouts in this fashion, you can avoid overtraining the abs and achieve superior development. However, while this approach sounds logical, it’s actually misguided.

The truth is, it’s impossible to completely isolate the upper abs from the lower abs; the anatomical composition of the abdominals simply doesn’t afford this ability. Contrary to popular belief, the rectus abdominis isn’t a group of independent muscles. Rather, it is one long muscular sheath that runs from just below your chest bone (i.e. sternum) all the way down into your pelvis (i.e. crest of the pubis). Thus, the upper and lower abdominals are not separable; you can’t train one part without affecting the entire muscle. Every exercise that you perform will, to some degree, target both areas of the muscle complex.

Within limits, however, you can exert more stress to the upper or lower portion of the abdominals. There are two basic types of exercises that accomplish this task: those that employ a posterior pelvic tilt and those that utilize flexion of the thoracic spine:

Movements that employ posterior pelvic tilt (such as the reverse curl and hanging leg raise) place increased emphasis on the lower abdominal area. To execute these moves, concentrate on raising your pelvis up towards your stomach—not simply raising and lowering your legs. This is a tricky proposition because the pelvis has a very limited range of motion and, if strict attention is not paid to proper form, your hip flexors will tend to take over during exercise performance. You therefore must attempt to exert
maximal effort into each contraction, forcing the lower portion of the abs to execute the
movement.

Conversely, exercises that involve thoracic spinal flexion (such as the crunch and its
variations) put maximal stress on the upper abdominal region. When executing these
movements, focus on pulling your chest down towards your hips. In order to prevent the
activation of your hip flexor muscles at the expense of your abdominals, your knees
should be bent with your lower back pressed to the floor throughout the movement.xi.
Keep your chin tucked and place your hands across your body—not behind your head.
There is a tendency to pull from the neck when your hands are behind your head,
especially when your muscles fatigue. This not only reduces stress to your abdominals,
but also can easily cause a strain to your cervical spine.

The Bottom Line
In final analysis, the upper and lower abs can’t be isolated from one another.
Regardless of which abdominal exercises you perform, you’re always working both the
upper and lower areas of the rectus abdominis (and even your obliques, too). When it
comes to abdominal training, you can only emphasize, not isolate!

Myth #3

Low intensity aerobic activities are better for fat burning than high
intensity exercise.

Distressingly, some fitness professionals have perpetrated the myth that, for optimal fat
burning, aerobics should be performed at a low level of intensity. For example, they
advocate walking, instead of running, as a means to shift the body into a “fat-burning
zone.” This theory is predicated on the fact that a greater proportion of fat is burned
during low-intensity exercise as opposed to exercise done at a higher level of intensity.xii.

The truth is, however, that the selective use of fat for fuel doesn’t necessarily translate
into a greater amount of fat loss. Consider that, during complete rest, almost 90 percent
of energy expenditure is derived from fat stores. If the percentage of fat calories were
the overriding factor in fat loss, then watching TV would make you skinny!

In reality, the loss of bodyfat is contingent on the total amount of fat calories burned—
not the percentage of calories derived from fat—and, from this standpoint, high-intensity
exercise invariably comes out ahead. For example, if you burn 200 calories in a half-
hour by walking on the treadmill at a low level of intensity, approximately 60 percent of
these calories will come from fat, giving you a net fat loss of 120 calories. On the other
hand, exercising for the same amount of time at a high intensity will burn approximately
400 calories with 160 of these calories coming from fat (even though the percentage of
calories derived from fat is only 40 percent). So while it’s true that the ratio of fat burned
is greater with low-intensity activities, exercising at higher intensities burns more fat on an absolute basis.

High-intensity exercise also has a positive effect on weight loss immediately following exercise. After finishing a training session, there is fair amount of excess post-exercise oxygen consumption (EPOC); your metabolism remains elevated for a protracted period of time. But only high-intensity exercise has a profound impact on EPOC. It burns about twice as many calories as a comparable low-intensity activity with results lasting for up to several hours post-workout. Better yet, it promotes the secretion of both growth hormone and noradrenaline. These hormones help to mobilize adipose stores, resulting in an increased utilization of fat of fuel. All told, there is both a greater total amount of calories expended as well as a greater amount of fat oxidation.

Further, when you consider the time related efficiency of training, low-intensity exercise provides a very poor cost/benefit dividend. Nothing is more laborious than walking on a treadmill for protracted periods. Why would you want to spend an hour exercising when you can get similar results from training for half that time?

The Bottom Line
In final analysis, it is misguided to believe that low intensity aerobics are best for burning fat. There is a direct correlation between physical effort and caloric expenditure; the harder you work, the more calories you expend. Accordingly, high-intensity exercise burns more fat calories on an absolute basis than lower intensity activities. And since the most important aspect of weight loss is the total amount of fat calories burned—not the percentage from fat—training should be performed at the highest intensity possible. Thus, if fat burning is your aim, performing cardiovascular exercise at a high level of intensity is clearly your best bet.

Myth #4
Sweat is a good indicator of exercise intensity.

“You gotta sweat!”

That’s the mantra of many exercise buffs who adhere to the belief that sweat has a positive correlation with workout intensity. Some go so far as to wear rubber suits or extra layers of clothing just to increase perspiration. The thinking goes that, if you’re not dripping with sweat after a training session, you didn’t have a good workout.

The truth is, however, that while sweat is usually associated with rigorous exercise, it is by no means essential to achieving results. When you work out, sweat is brought on by an elevation of body temperature from metabolic heat. Your body regulates its temperature by activating your sweat glands, which then release water through your pores as a cooling mechanism. Thus, sweat is an indicator that your body temperature
is rising, not necessarily that you are exercising at an intense level. For example, within minutes of entering a sauna, sweat will begin to bead on your body. After a mere half an hour, you’ll be completely drenched in perspiration. But does this mean that you’ve burned extra calories or stimulated your muscles? Of course not!

Although you will lose weight from sweating, the effect is only transient. No fat is burned whatsoever as a result of perspiration. Rather, all of the loss is from fluids; as soon as you re-hydrate, body weight returns to pre-sweat levels.

Interestingly, being out of shape does not increase your propensity to sweat. In actuality, the more physically fit that you are, the more you will tend to perspire. Frequent exercise tends to make your sweat glands increasingly sensitive to rises in body temperature. Over time, your body begins to perceive when you’re beginning to train, and, not wanting to store extra heat, signals the sweat glands sooner than in an untrained individual.

So how then do you go about measuring exercise intensity? Well, anaerobic exercise (i.e. strength training) can be gauged directly by effort or, more precisely, how much you challenge the capacity of your muscles. The closer you come to approaching muscular fatigue, the greater your intensity of effort. Given this concept, training can be based on a percentage of your one-repetition maximum (one-rep max). As the name implies, your one-rep max is the maximal amount of weight that can be lifted one time for a specific movement. By multiplying one-rep max by a given percentage, you can readily determine the amount of weight needed for a particular movement.

It’s important to realize, though, that different goals require different training percentages. For instance, if you want to increase pure strength, it is best to train at a very high percentage of your one-rep max (i.e. 95 percent or more). Conversely, for improving localized muscular endurance and muscle tone, training at a lower percentage of your one-rep max (i.e. around 60 percent) would be preferable. But regardless of the percentage used, intensity is always dependent on effort; if you don’t tax your muscles, you aren’t training with enough intensity.

Aerobic intensity, on the other hand, is a function of oxygen uptake. Oxygen uptake is expressed in terms of a VO2 max—the maximum amount of oxygen that can be removed from circulating blood and used by the working muscles during a specified period. The trouble is, direct measurements of VO2 max are difficult to procure. Skilled technicians and sophisticated equipment are necessary to obtain accurate results. Thus, testing for VO2 max must usually be performed under lab conditions, making it an impractical yardstick for the vast majority of trainees.

Fortunately, a viable alternative exists for quantifying aerobic intensity: maximal heart rate (MHR). There is a strong correlation between MHR and VO2 max; the relationship between the two is predictable, with a fairly small margin of error. But unlike VO2 max, MHR can be determined without any expensive equipment or skilled personnel. Simply subtract your age from 220—it’s that easy.
Using MHR, you can then calculate your target training rate. Just multiply MHR by your desired training intensity percentage and, voila, you’ve got your target training rate. For example, if you are 20 years old and want to train at 80 percent intensity, your target training rate would be 160 beats per minute (220 - 20= 200 x .8= 160).

Heart rate readings can be readily obtained by checking your pulse at frequent intervals. While the carotid artery (located in the neck) is often used to determine pulse rate, pressing on this vessel can reduce circulation to the brain—a fact that can potentially cause you to pass out. A better alternative is to use the radial artery (located in the wrist) or, for extra convenience, a heart rate monitor can be worn.

Generally, your target training rate should fall somewhere between 50 to 85 percent of your MHR. However, techniques such as interval training (where short bursts of extremely intense cardiovascular activity are followed by longer periods of mildly intense exercise) can also be employed depending on the desired fitness goal.

The Bottom Line
In final analysis, forget about sweat; it has little correlation with the intensity of training and certainly doesn’t determine whether or not you’ve had a successful workout. Intensity is a function of effort. So gauge you workout by how hard you train, not how much you perspire.

\[ \text{Reference:}\]


